

2017-2018 ANNUAL REPORT

University of Memphis Student Chapter of the Earthquake Engineering Research Institute

Report Date: May, 2018

This report summarizes the membership and activities conducted by the University of Memphis Student Chapter of the Earthquake Engineering Research Institute during the 2017-2018 academic year.

MISSION & GOALS

The mission of the EERI student chapter at The University of Memphis is to increase the awareness of students about the earthquake risk and the role of engineers and scientists to mitigate the impact of earthquake on society. Our EERI student chapter aims at promoting the education and provides the opportunity for students to develop leadership and interpersonal skills within the earthquake engineering fields.

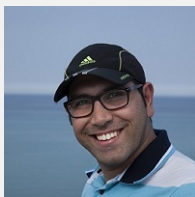
MEMBERSHIP

The University of Memphis Student Chapter had a total of 25 members in 2017-2018.

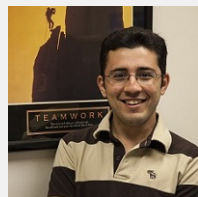
OFFICERS

The Board consisted of the following members:

Role	Name	Email	Student Status
President & SLC Repr.	Mohsen Maniat	mmaniat@memphis.edu	Graduate student
Vice President & SLC Repr.	Nima Nazemi	nnazemi@memphis.edu	Graduate student
Secretary	Farid Hosseinpour	fhssnpur@memphis.edu	Graduate student
SDC coordinator	Arash Yarahmadi	yarahmadi@memphis.edu	Graduate student
Treasurer	Jalal Kiani	jkiani@memphis.edu	Graduate student



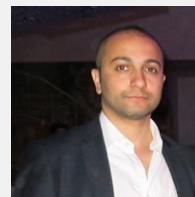
Mohsen Maniat



Nima Nazemi



Farid Hosseinpour



Arash Yarahmadi



Jalal Kiani

FACULTY & INDUSTRY ADVISORS

Dr. Shahram Pezeshk. Email: spezeshk@memphis.edu, phone: (901)678-4727

Sponsor Name/Organization	Amount
Allen & Hoshall	\$250.00
Hugo Rojas	\$200.00
Arash Zandieh	\$200.00
Scott Stovall	\$500.00
EERI	\$500.00
Andrew Assadollahi	\$490.00
Seyed Mehrdad Hosseini	\$400.00
Chad Stewart & Associates, Inc	\$1,000.00
Cannon \$ Cannon Inc	\$250.00
EERI New Madrid Chapter	\$500.00
Mohammad Farshchin	\$200.00
EERI	\$500.00
Farhad Sedaghati	\$200.00
Alireza Haji Soltani	\$400.00
Hugo Rojas	\$200.00
Herff College of Engineering	\$2,850.00

CHAPTER ACTIVITIES

1- Engineering Day (E-Day, Friday, October 23rd 2015) at the University of Memphis

E-Day is an annual open house event hosted by the Herff College of Engineering at the University of Memphis. Composed of numerous activities, including the competitions outlined below as well as engineering lab tours and multiple walk-up activities throughout the college, the event has historically attracted thousands of Memphis area middle and high school students! This year, E-Day was also a part of STEMconnector®’s STEM Career Accelerator Day. EERI student chapter at the University of Memphis actively participated in the 2016 E-Day and talked to visiting students about the earthquake engineering related issues.





2- EERI Student Chapter Seminar (Friday, March 2 2018)

We invited Dr. Zarghamee to visit have a lecture on “Development of a New Standard for Renewal of Pipelines using Carbon Fiber Reinforced Polymers” and to share his experience with students and faculty. Dr. Zarghamee has forty-five years of consulting, academic, and management experience. He specializes in structural engineering and applied mechanics, infrastructures, and mathematics. His experience includes analysis and design of complex structures and mechanical systems, investigation including condition assessment, failure risk analysis of structures and infrastructures and repair, rehabilitation, and asset management of deteriorated infrastructures. His expertise also includes wind and earthquake engineering.





Civil Engineering and EERI Student Chapter Seminar Series

Development of a New Standard for Renewal of Pipelines using Carbon Fiber Reinforced Polymers



Mehdi Zarghamee

Senior Principal
Simpson Gumpertz & Heger Inc.

Dr. Zarghamee has forty-five years of consulting, academic, and management experience. He specializes in structural engineering and applied mechanics, infrastructures, and mathematics. His experience includes analysis and design of complex structures and mechanical systems, investigation including condition assessment, failure risk analysis of structures and infrastructures and repair, rehabilitation, and asset management of deteriorated infrastructures. His expertise also includes wind and earthquake engineering.

Degradation of buried pipeline infrastructures require renewal. Conventional repair or replacements may be disruptive. A renewal system that has least disruption is carbon fiber reinforced polymer (CFRP) lining of degraded pipe pieces. Such liners may be installed by hand layup in large diameter pipes that allow man entry, or by robotically or other innovative techniques without man entry in smaller diameter pipelines. The presentation will describe the process employed to perform the theoretical and experimental research needed for the development of a standard that provides the requirements for material, design, and installation of CFRP liners in degrading host pipe with a service life of 50+ years. In this presentation, failure modes and design limit states of a CFRP liner are identified, the governing design approach, and the theoretical and experimental basis are presented. The designs conforming to this standard will provide strength, durability, reliability, and watertightness. Strength is governed by the material rupture and structural stability. Durability requires accounting for loss of strength during the service life of the structure resulting from exposure to environment, and for the effect of load duration on the strength and modulus. Reliability is insured through analysis of variability of loads and of resistance. Watertightness is achieved through testing of the lamiate or a part of the lamiate.

1 Professional Development Hour (PDH) certificates will be provided

March **2**

Reception: 11:30AM Room EA102D
Seminar: 12:30PM Room EA203

Rooms EA102D and EA203 are located in the Engineering Administration Building
The reception will include pizza and soft drinks. For more information, please contact:
rtbrdros@memphis.edu, mmaniat@memphis.edu, or spezeschk@memphis.edu

THE UNIVERSITY OF
MEMPHIS

SEISMIC DESIGN COMPETITION TEAM

SDC Team Members

A complete list of members is shown below.

Name	Role
Paul Montray	Captain
Huan Ngo	Team Member
Tylor White	Team Member
John Zacher	Team Member
Andrew Robinson	Team Member
Falcon Hostetter	Team Member

